

**Remarks**

Favorable reconsideration of this application, in view of the following remarks and discussion, is respectfully requested.

Claims 2, 4-7, 18, and 21-29 are currently pending in the application.

In the outstanding Office Action, Claims 2, 18, and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Publication No. 2001-118768 to Suga.

Initially, Applicants express thanks for the Examiner's indication that Claims 4-7 are allowed.

Applicants further express thanks for the Examiner's indication that Claims 22-29 recite allowable subject matter, such that the claims although having been objected to would be allowable if rewritten in independent form.

As stated above Claims 2, 18, and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Suga. Applicants respectfully request that the rejection of the claims be withdrawn for the following reasons.

The present invention is directed to sheet feeding apparatuses, image forming apparatuses, and sheet feeding methods. Independent Claims 2 and 18 recite at least one driven gear disposed on a cantilever shaft, the at least one driven gear having first and second pairs of adjacent teeth of a same set of teeth, the first pair of adjacent teeth separated by a first gap and the second pair of adjacent teeth separated by a second gap less than the first gap. At least one driving gear includes a set of teeth adapted to engage the first and second pairs of adjacent teeth to drive the at least one driven gear. A reverse roller is pressed into contact with a feed roller, the reverse roller supported on an end of the cantilever shaft and adapted to be rotated in a sheet feeding direction and a reverse direction and to separate and convey sheet media held between the feed roller and the reverse roller. Independent Claim 21 recites feeding sheet media between a feed roller and a reverse roller pressed into contact with the

feed roller, the reverse roller adapted to be rotated by a driven gear and to separate and convey the sheet media held between the feed roller and the reverse roller. First and second pairs of adjacent teeth of a same set of teeth of the driven gear are engaged with a set of teeth of the driving gear, the first pair of adjacent teeth separated by a first gap and the second pair of adjacent teeth separated by a second gap less than the first gap.

Suga is directed to a paper feeding device. As shown in Figure 14, for example, of Suga, and as discussed in the English language abstract provided with the Office Action as well as the enclosed computer English language translation obtained from the Japanese Patent Office website, Suga shows a feed roller 201 on a support shaft 32. A feed actuation gear 65 is also on the support shaft 32. The feed actuation gear 65 cooperates with a control gear 80. Through the control gear 80, a support plate 70 advances sheets supported on the support plate 70. A motor M2 is used to operate a separation roller 53.

Regarding the rejection of independent Claims 2 and 18, Applicants respectfully assert that Suga does not teach, or render obvious, however, the claimed features of a driven gear disposed on a cantilever shaft on which a reverse roller is supported, the driven gear having first and second pairs of adjacent teeth of a same set of teeth, the first pair of adjacent teeth separated by a first gap and the second pair of adjacent teeth separated by a second gap less than the first gap, as recited in the independent claims. Specifically, Applicants respectfully assert that Suga does not show or state the feed actuation gear 65 disposed on a shaft on which the separation roller 53 is supported, but rather shows the feed actuation gear 65 disposed between the feed roller 201 and the support plate 70.

Specifically, independent Claims 2 and 18 recite “at least one driven gear disposed on the cantilever shaft, the at least one driven gear having first and second pairs of adjacent teeth of a same set of teeth, the first pair of adjacent teeth separated by a first gap and the second pair of adjacent teeth separated by a second gap less than the first gap.” Thus,

Applicants respectfully request that the rejection of independent Claims 2 and 18 under 35 U.S.C. § 102(b) be withdrawn, and the allowance of independent Claims 2 and 18.

Regarding the rejection of independent Claim 21, for reasons similar to those discussed above with respect to independent Claims 2 and 18, Applicants respectfully assert that Suga also does not teach, or render obvious, the claimed features of a reverse roller adapted to be rotated by a driven gear, the driven gear including first and second pairs of adjacent teeth of a same set of teeth, the first pair of adjacent teeth separated by a first gap and the second pair of adjacent teeth separated by a second gap less than the first gap, as recited in the independent claim.

Specifically, independent Claim 21 recites “the reverse roller adapted to be rotated by a driven gear . . . [,] first and second pairs of adjacent teeth of a same set of teeth of the driven gear . . . , the first pair of adjacent teeth separated by a first gap and the second pair of adjacent teeth separated by a second gap less than the first gap.” Thus, Applicants respectfully request that the rejection of independent Claim 21 under 35 U.S.C. § 102(b) be withdrawn, and the allowance of independent Claim 21.

Applicants respectfully assert that dependent Claims 22-29 are allowable for the same reasons as the independent claims from which they depend, as well as for their own features. Thus, Applicants respectfully request that the objection to the claims be withdrawn, and the allowance of dependent Claims 22-29.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 2, 4-7, 18, and 21-29 is earnestly solicited.

Application No. 09/928,352  
Reply to Office Action of August 9, 2004

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

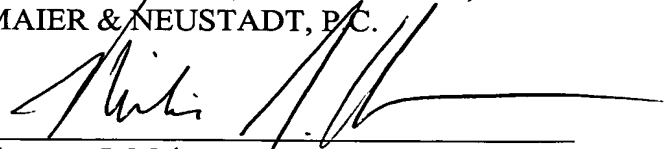
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Respectfully submitted,

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